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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,112

07/25/2006

Martin Kieren

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EXAMINER

NGUYEN, CHUONG P

ART UNIT

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3663

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12/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,112	Applicant(s) KIEREN ET AL.	
	Examiner Chuong P. Nguyen	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-28 is/are pending in the application.
- 4a) Of the above claim(s) 20-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 and 26-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicants' 10/09/2008 Amendment, which directly added new claims 26-28 and traversed the rejection of the claims of the 07/28/2008 Office Action are acknowledged.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobaru et al (US 6,438,463) in view of Faye et al (US 20020069006).

Regarding claim 12, Tobaru et al disclose in Fig 11-12 a method for a rollover stabilization of a vehicle in a critical driving situation, comprising: measuring different driving-condition variables by a sensor system (i.e. lateral acceleration sensor 15, rolling angular speed

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sensor 16, steering angle sensor 17) (col 8, line 57-63; col 13, lines 16-20); and estimating information from a relationship between a steering variable and a roll variable, the information relating to a rollover tendency of the vehicle and being taken into account in a scope of the rollover stabilization (col 12, line 64 – col 14, line 55). Tobaru et al do not explicitly disclose the step of causing an actuator to intervene with a rollover-stabilization algorithm in a vehicle operation in a situation critical to rollover, in order to stabilize the vehicle. Faye et al teach in the same field of endeavor in Fig 2 such step of causing an actuator (i.e. actuator system 202 which includes engine intervention, brake intervention, retarder) to intervene with a rollover-stabilization algorithm in a vehicle operation in a situation critical to rollover, in order to stabilize the vehicle (Abstract; [0010]+; [0026]+; [0033]+; [0062]-[0065]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such step of causing an actuator to intervene with a rollover-stabilization algorithm in a vehicle operation in a situation critical to rollover, in order to stabilize the vehicle as taught by Faye et al in the method of Tobaru et al for stabilizing the vehicle via actuator in a rollover situation since it has been held that if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill (MPEP 2143).

Regarding claim 13, Tobaru et al disclose in Fig 11-12 the step of ascertaining one of an indicator variable and one of a characteristic property and a variable of the rollover stabilization as a function of the rollover tendency (i.e. rolling angle, rolling angular speed, threshold value lines S, S) (col 9, lines 5-45; col 12, line 64 – col 14, line 55). Tobaru et al do not explicitly disclose a stabilization action is one of enabled and deactivated in accordance with the indicator

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variable. Faye et al teach in the same field of endeavor in Fig 2 such step of ascertaining one of an indicator variable and one of a characteristic property and a variable of the rollover stabilization as a function of the rollover tendency (i.e. characteristic quantities ω_{solld} , β_{solld} , $\delta_{tapsolld}$) and such stabilization action (i.e. engine intervention, brake intervention, retarder) is one of enabled and deactivated in accordance with the indicator variable ([0038]-[0065]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such stabilization action as taught by Faye et al in the method of Tobaru et al for stabilizing the vehicle in a rollover situation accordingly with the indicator variable since it has been held that if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill (MPEP 2143).

Regarding claim 14, Tobaru et al disclose in Fig 11 the steering variable includes a steering angle (i.e. steering angle sensor 17) (Fig 12 “S21”; col 13, line 16+, line 58+).

Regarding claim 15, Tobaru et al disclose in Fig 2-3, 6, 9 the roll variable includes a roll rate (i.e. rolling angle vs. rolling angular speed with overturning regions and hysteresis lines) (Fig 2-3, 6, 9).

Regarding claim 16, Tobaru et al disclose the step of changing, as a function of the rollover tendency, a control threshold (i.e. threshold lines S, S) of the rollover-stabilization algorithm (Abstract; Fig 2-3, 6, 9; col 3-4; col 7, line 7+).

5. Claims 17-18 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobaru et al modified by Faye et al as applied to claim 12 above, and further in view of Takumi

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(JP 63116918 in which the translation was done by the Examiner and included in previous 07/28/2008 Office Action).

Regarding claim 17, Tobaru et al modified by Faye et al do not explicitly disclose the step of ascertaining, from the steering variable and the roll variable, a rollover indicator indicating the rollover tendency of the vehicle. Takumi teaches in the same field of endeavor in Fig 1-2 such step of ascertaining, from the steering variable and the roll variable (i.e. steering sensor, roll prediction sensor / roll sensing sensor in conjunction with controller 6), a rollover indicator (i.e. indicating gauge 7) indicating the rollover tendency of the vehicle (pages 3-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such step of ascertaining the rollover indicator as taught by Takumi in the method of Tobaru et al modified by Faye et al for efficiently determining and stabilizing the vehicle in a rollover situation since it has been held that if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill (MPEP 2143).

Regarding claims 18 and 27, Tobaru et al modified by Faye et al do not explicitly disclose the rollover indicator is determined by a fuzzy-information processing unit. Takumi teaches in the same field of endeavor in Fig 1 such rollover indicator (i.e. indicating gauge 7) that is determined by a fuzzy-information processing unit (i.e. controller 6 that performs arithmetic and logic operation) (pages 4-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such rollover indicator that is determined by a fuzzy-information processing unit as taught by Takumi in the method of Tobaru

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et al modified by Faye et al for efficiently determining and stabilizing the vehicle in a rollover situation since it has been held that if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill (MPEP 2143).

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tobaru et al modified by Faye et al and Takumi as applied to claim 18 above, and further in view of Ehlbeck et al (US 6,498,976).

Regarding claim 19, Tobaru et al modified by Faye et al and Takumi do not explicitly disclose the step of weighting the rollover indicator by a weighting function indicating a quality of an estimation of the rollover indicator. Ehlbeck et al teach in the same field of endeavor in Fig 7, 9, 10 such step of weighting the rollover indicator (col 9, line 46 – col 10, line 46; col 21, line 18 – col 23, line 23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such step of weighting the rollover indicator as taught by Ehlbeck et al in the method of Tobaru et al modified by Faye et al and Takumi for efficiently determining and stabilizing the vehicle in a rollover situation since it has been held that if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill (MPEP 2143).

7. Claims 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobaru et al modified by Faye et al as applied to claim 12 above, and further in view of Takumi and Ehlbeck et al.

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Regarding claims 26 and 28, Tobaru et al modified by Faye et al disclose the invention except for the steps of ascertaining, from the steering variable and the roll variable, a rollover indicator indicating the rollover tendency of the vehicle; weighting the rollover indicator by a weighting function indicating a quality of an estimation of the rollover indicator; and a rollover indicator that is determined by a fuzzy-information processing unit. Takumi teaches in the same field of endeavor in Fig 1-2 such step of ascertaining the rollover indicator; and such rollover indicator (i.e. indicating gauge 7) that is determined by a fuzzy-information processing unit (i.e. controller 6 that performs arithmetic and logic operation) (pages 3-8). Ehlbeck et al teach in the same field of endeavor in Fig 7, 9, 10 such step of weighting the rollover indicator (col 9, line 46 – col 10, line 46; col 21, line 18 – col 23, line 23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate such step of ascertaining the rollover indicator and such rollover indicator as taught by Takumi and such step of weighting the rollover indicator as taught by Ehlbeck et al in the method of Tobaru et al modified by Faye et al for efficiently determining and stabilizing the vehicle in a rollover situation since it has been held that if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill (MPEP 2143).

8. While patent drawings are not drawn to scale, relationships clearly shown in the drawings of a reference patent cannot be disregarded in determining the patentability of claims. See In re Mraz, 59 CCPA 866, 455 F.2d 1069, 173 USPQ 25 (1972).

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Conclusion

9. The cited prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong P. Nguyen whose telephone number is 571-272-3445.

The examiner can normally be reached on M-F, 8:00 - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CN

/Jack W. Keith/
Supervisory Patent Examiner, Art Unit 3663